## Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims:**

Claims 1-5 (Canceled)

- A method for producing a coated cutting tool which 6. (Currently Amendment) comprises forming a hard coating film by a chemical vapor deposition method on a surface of a hard metal base material of a hard alloy comprising a hard phase of tungsten carbide and at least one material selected from the group consisting of a carbide, a nitride and a carbonitride of at least one metal selected from the group consisting of the Group 4, 5 and 6 of the Periodic Table and a mutual solid solution thereof and a binder phase of at least one element selected from the group consisting of Fe, Ni and Co, wherein the hard coating film comprises a columnar crystal structure layer which comprises at least one material selected from the group consisting of a carbide, a carbonitride and a carbonitroxide of titanium, the columnar crystal structure layer contains particles having crystal particle diameters in a direction horizontal to an interface between the hard coating film and the base material are large and the particles having crystal particle diameters in the same direction are small, a ratio of an average particle diameter of the large particles to an average particle diameter of the small particles is 3 to 50, and a hydrocarbon gas mainly comprising ethane is used as a carbon element-feeding gas for forming the hard coating film.
- 7. (Original) The method according to Claim 6, wherein the hydrocarbon gas comprises at least one selected from methane, acetonitrile and propane, in addition to ethane.
- 8. (Currently Amended) The method according to Claim 6, wherein the coating film formed by chemical vapor deposition contains at least one <u>layer</u> selected from the carbide, carbonitride and carbonitroxide of titanium, and ethane is used as the carbon element-feeding gas for forming the coating film.
- 9. (Cancelled)

- 10. (Original) The method according to Claim 6, wherein a compressive residual stress is applied by at least one selected from ion implantation, shot peening and heat treatment.
- 11. (New) The method according to claim 6, wherein the columnar crystal structure layer comprises a titanium carbide layer.
- 12. (New) The method according to claim 6, wherein the columnar crystal structure layer comprises a titanium carbonitride layer.
- 13. (New) The method according to claim 6, wherein the columnar crystal structure layer comprises a titanium carbonitroxide layer.